

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

M351758861

FACILITY: Henry Ford Health System		SRN / ID: M3517
LOCATION: 15855 19 MILE, MOUNT CLEMENS		DISTRICT: Warren
CITY: MOUNT CLEMENS		COUNTY: MACOMB
CONTACT: John March , Plant Operations Supervisor		ACTIVITY DATE: 06/17/2021
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Onsite inspection		
RESOLVED COMPLAINTS:		

On Thursday, June 17, 2021, Michigan Department of Environment, Great Lakes and Energy (EGLE)-Air Quality Division (AQD) staff, I (Shamim Ahammod) conducted a scheduled inspection of Henry Ford Health System (SRN: M3517) located at 15855 Nineteen Mile Road, Clinton Township, MI 48038. The purpose of the inspection was to determine the company's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and the conditions of Permit to Install (PTI) Nos. 18-21, 125-18, 996-78, and 995-78.

SOURCE DESCRIPTION & PERMIT HISTORY

Henry Ford Macomb Hospital is considered a minor source for hazardous air pollutants (HAPs) and Criteria Pollutants. This area is currently designated as nonattainment for ozone. According to Mr. March, they do not have any chemical sterilizers at the facility. They use steam sterilizers to sterilize the temperature-sensitive equipment in the hospital.

On June 4, 2021, PTI No. 18-21 was issued to Henry Ford Health System Macomb Hospital located at 15855 19 Mile Road, Clinton Township to install and operate EUBOILER1, EUBOILER2, EUBOILER3, EUGENSET1, EUGENSET2, EUGENSET3, EUGENSET4, and EUGENSET5. According to Mr. Gordon Graham, Manager of Construction of Henry Ford Macomb Hospital, these three boilers, and five generators will be installed in the middle of 2022.

On October 4, 2018, PTI No. 125-18 was issued to Henry Ford Health System to install and operate a 2750 BHP (2MW) diesel-fueled emergency engine (EUENGINE1) with the model year of 2001 to generate electricity during emergencies. Since EUENGINE1 was manufactured in 2001, it is not subject to 40 CFR 60 Subpart IIII-NSPS for Stationary Compression Ignition Internal Combustion Engines. EUENGINE1 is not subject to 40 CFR 63 Subpart ZZZZ-NESHAP for stationary Reciprocating Internal Combustion Engines, per 40 CFR 63.6585(f)(3), since this engine is an existing institutional engine located at an area source of HAPs and are not contractually obligated to supply power.

The permittee also operates three existing diesel-fueled emergency engines (750kVA/600KW-manufactured date: 4-07-1995, 750kVA/600KW-manufactured date: 4-07-1995, and 500kVA/300KW-manufactured date: 11-13-2003) that are permit to install exempt per R 336.1285 (2)(g).

These emergency engines do not appear to be subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63 Subparts A and ZZZZ per 40 CFR 63.6585(f)(3) because they are existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii). EGLE-AQD has not accepted delegation to enforce 40 CFR 63 Subpart ZZZZ at area sources of HAP emissions.

On 8/28/1979, PTI No. 996-78 was issued to Henry Ford Health System Macomb Hospital (previous name: Saint Joseph Hospital) to install and operate two water tube boilers rated at 36,000 LBS/M.

These boilers run on gas at 45,705 SCF/hr (46619100 BTU/hr.) and/or #2 fuel oil at 333 Gal./hr (46486800 BTU/hr). One boiler's installation date was on 1/3/1974, the model number is D-60, unit number is WL-2153. The other boiler's installation date was on 2/22/1974, the model number is D-60, unit number is WL-2154. Since the two water tube boilers were constructed before June 9, 1989, these are not subject to 40 CFR 60 Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

On August 3, 1990, as a result of the necessity to retain #2 fuel oil back-up capability for emergency purposes, the PTI No. 996-78 had been revised. Since the permittee burns natural gas as a primary fuel for the boilers and fuel oil is the backup fuel in the event of natural gas interruption, these two boilers are not subject to 40 CFR 63 Subpart JJJJJ-National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area sources per 40 CFR 63.11195. EGLE-AQD has not accepted delegation to enforce 40 CFR 63 Subpart JJJJJ at area sources of HAP emissions.

On 4/13/1979, PTI No. 995-78 was issued to Henry Ford Health System (previous name: Saint Joseph Hospital) to install and operate a 5,000 gallon and a 20,000 underground fuel oil storage tank. In 2016, 5000-gallon was replaced by 3000-gallon storage tank. According to Mr. March, currently, both underground fuel oil storage tanks are empty. They have added two 50,000-gallon storage tanks on 6-21-2021. Per R 336.1284(2)(d), "the requirement of R 336.1201(1) to obtain a permit to install does not apply to containers, reservoirs, or tanks used exclusively for any of the following: (d) Storage of no.1 to no. 6 fuel oils as specified in ASTM D396, gas turbine fuel oils No. 2-GT to 4-GT as specified in ASTM D2880, aviation gas as specified in ASTM D910, jet fuels as specified in ASTM D1655, diesel fuel oils no. 2-D and 4-D as specified in ASTM D975, or biodiesel fuel oil and blends as specified in ASTM D6751 and ASTM D7467".

INSPECTION

At 1:00 PM, I arrived at the facility and was greeted by Mr. John March, Plant Operations Supervisor. I introduced myself, provided credentials, and stated the purpose of the inspection. During the pre-inspection meeting, I discussed the permit conditions requirements and requested the record and monitoring information. Then I toured the facility with Mr. March.

REGULATORY ANALYSIS

PTI 996-78

Per Special Condition (SC) 10, visible emissions from the boilers shall not exceed a 6-minute average of 20% opacity, except as specified in Rule 301(1)(a). At the time of inspection, I did not observe any visible emissions from the boilers' stack. Per SC 11, the applicant shall not fire any fuel in the two boilers other than natural gas, except for #2 fuel oil during burner testing operations or when the natural gas supply has been interrupted during emergencies. The permittee only burns pipeline-quality natural gas in the boilers.

PTI No. 125-18 was issued to this facility to install and operate a 2750 bhp diesel-fueled emergency generator (EUENGINE1) with the model year of 2001, and a displacement of 4.3 liters/cylinder. At the time of inspection, I verified the nameplate and records. I observed the engine capacity was 1825 KW (approximately 2447 BHP) and the engine displacement per cycle was 4.3 liters.

Material Limits

Per SC II.1, the permittee shall burn only diesel fuel, in EUENGINE1 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum

aromatic content of 35 volume percent. Mr. March sent me a BP Ultra-Low Sulfur No. 2 Diesel Fuel product information. I reviewed this information. It appears that the permittee burns only diesel fuel in EUENGINE1 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40.

Process/operational Restrictions

Per SC III.1, the permittee shall not operate EUENGINE1 for more than 500 hours per year on a 12-month rolling time as determined at the end of each calendar month. Based on records, the total operating hours of the emergency generator (generator#4) were 33 hours (Non-emergency run time - 23.5 hrs., and Power Outage Emergency run time -9.5 hours) from January through December 2020.

Design/Equipment Parameters

Per IV.1, I observed a non-resettable hour meter was installed on the engine and the total operation time of the emergency generator was 10400 hours on June 17, 2021. In my last visit on November 21, 2019, it was 10348 hours. The permittee started operating this engine on January 5th, 2019, with an indication of 10319 hours in the non-resettable meter.

Per SC IV.2, the maximum rated power output of EUENGINE1 shall not exceed 2750 BHP as certified the equipment manufacturer. I verified the nameplate of the engine and observed the maximum rated power output of the engine was 1825 KW (approximately 2447 BHP).

Monitoring/recordkeeping

As required in SC VI.2, I was provided a record of the total hours of operation and the hours of operation during non-emergencies for EUENGINE1, on a monthly and 12-month rolling period. A total of 9.5 hours were spent on an emergency operation and 23.5 hours were spent on the non-emergency operation.

Per SC VI.3, I was provided fuel supplier record, BP Ultra-Low Sulfur No. 2 Diesel Fuel product information. I reviewed this information. It appears the permittee burns only diesel fuel in EUENGINE1 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40.

Stack/vent restrictions

Stack and vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above ground (feet)
1. SVENGINE1	16	19

At the time of inspection, the exhaust stacks appeared vertical and unobstructed and the SVENGINE1 stack diameter appeared 16 inches in diameter and appeared to be at least 19 feet above ground in height.

Based on an onsite inspection, and review of records, the facility complies with the requirements of PTI Nos. 18-21, 125-18, 996-78, and 995-78.

NAME 

DATE July 12, 2021

SUPERVISOR

